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Air Power Doctrine and the Strategic Label

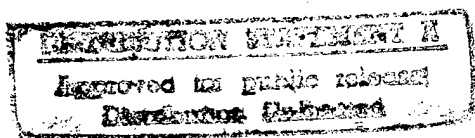
by

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The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.



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## ABSTRACT

Joint force operations have improved dramatically in recent years. Development of a robust joint doctrine must receive some credit for this improvement. In turn, each Service should evaluate its doctrine for compatibility with the policies and principles in joint doctrine.

Strategic bombardment theory is a doctrinal concept that has greatly influenced air power thinking. It was the bedrock of World War II air power operations and it assumed a prominent role in the post-World War II United States Air Force. The newly created Air Force focused on prevention of global nuclear war and was unprepared for the challenges of unconventional warfare in Korea and Vietnam.

Through emphasis on the unique capabilities of air power, Air Force doctrine stresses the strategic preeminence of the air power mission. As a result of air power's outstanding success in the Gulf War, many air power advocates believe that air power has finally matured and assumed a dominant role in warfare.

Doctrine is one means of changing attitudes and emphasizing principles that promote concepts essential to effective joint warfare. By eliminating comparisons and references to surface forces, air power doctrine will avoid creating an "us against the other Services" mentality in young airmen.

Increased doctrinal emphasis on joint warfare would better prepare airmen to excel in the joint warfare environment. Knowledge of air power employment at all levels of war will improve, and air power will become a more integrated component of joint force operations.



## **INTRODUCTION**

*Faced with flat budgets and increasingly more costly readiness and modernization, we should not expect a return to the larger active forces of the Cold War period. Simply to retain our effectiveness with less redundancy, we will need to wring every ounce of capability from every available source. That outcome can only be accomplished through a seamless integration of Service capabilities. To achieve this integration while conducting military operations we must be fully joint: institutionally, organizationally, intellectually, and technically.*

**-Joint Vision 2010**

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 made fundamental changes to the US military defense structure. As a result, joint force operations have improved dramatically in recent years. Desert Storm exemplifies this improvement and demonstrates the capacity of a properly organized and employed joint force to dominate a battlespace.

Development of a robust joint doctrine must receive some credit for the improvement of joint operations. In turn, each Service should evaluate its doctrine for compatibility with the policies and principles in joint doctrine. Concepts rooted in outdated ideas must be replaced with principles that enhance a Service's ability to contribute to a joint force capable of performing the functions envisioned by the joint force commander (JFC).

Strategic bombardment theory is an example of a doctrinal concept that continues to influence air power thinking. Early theorists asserted that air power would revolutionize warfare and provide the means to avoid the staggering losses of World War I trench warfare. After World War II, strategic bombing was the mission used to justify separation from the Army and it dominated the fledgling United States Air Force. The zeal with which strategic bombardment was promoted and the fallout of early roles and missions disputes fostered suspicion and jealousy among the Services that is still apparent today. Such attitudes are not conducive to the effective conduct of joint warfare.



Doctrine is one means of changing attitudes and highlighting principles that promote concepts essential to effective joint warfare. Through emphasis on the unique capabilities of air power, Air Force doctrine stresses the strategic preeminence of the air power mission instead of emphasizing a joint force concept of operations that would better prepare airmen to excel in the joint warfare environment.

### **Early Air Power Theory**

Throughout the history of air power, theorists have defined many missions performed by the air arm of the United States military as strategic. This label is rooted in early air power theory that sought to justify combat employment of aircraft. Air power theory is grounded in the ideas of Douhet, Mitchell, and in efforts to establish the Air Force as a separate service.

The airplane's value as a useful reconnaissance platform was widely recognized in World War I. After World War I, the potential use of the airplane in war, particularly its aerial bombardment capabilities, received much attention. In his 1921 book The Command of the Air, Giulio Douhet recorded his ideas on air power and its capacity to revolutionize warfare. Douhet believed that aircraft "altered the fundamental character of warfare" and that "by bombing cities and factories instead of military forces (except air forces), the enemy could be defeated through shattering the civilian will to continue resistance."<sup>1</sup> He wrote that "in order to conquer the air, it is necessary to deprive the enemy of all means of flying, by striking at him in the air, at his bases of operation, or at his production centers--in short, wherever those means are to be found. This kind of destruction can be accomplished only in the air or in the interior of the enemy's country."<sup>2</sup>



Brigadier General William Mitchell emerged from World War I as the most outspoken advocate in the United States military for employment of the airplane in future warfare. He believed that air power should be controlled by professional airman who understood its capabilities, not by officers in the Army who planned to employ the airplane in ground support roles. Mitchell wrote in Winged Defense that "the missions of armies and navies are very greatly changed from what they were. No longer will the tedious and expensive processes of wearing down the enemy's land forces by continuous attacks be resorted to. The air forces will strike immediately at the enemy's manufacturing and food centers, railways, bridges, canals and harbors."<sup>3</sup> He predicted that the use of airpower would result in "a diminished loss of life and treasure and will thus be a distinct benefit to civilization."<sup>4</sup> "Air forces will attack centers of production of all kinds, means of transportation, agricultural areas, ports and shipping...They will destroy the means of making war...."<sup>5</sup> In Mitchell's words, similar to those of Douhet, are the underpinnings of strategic bombing theory that became the foundation of air power doctrine in the Army Air Corps.

### **The Air Corps Tactical School and Air Power Theory**

In the 1920s, the Air Corps Tactical School (ACTS) was the doctrinal and training authority for the US Army Air Corps. "Beginning around 1926, the strategic role of bombardment aircraft operating independently of surface forces emerged as an important theme, and after 1932 it became dominant."<sup>6</sup>

The Air Corps Tactical School of the 1930s was manned by air power enthusiasts whose ideas coalesced to form the strategic bombing plans the United States used in World War II. By 1939, the schools primary concentration on employment of bomber aircraft in war produced a



theory based on three principles: 1) a modern industrial state would swiftly cease to function if vital elements within its more important economic systems could be destroyed, 2) well-planned, well-flown bomber formations could always get through and, hence, that such formations could be self-defending, and 3) daylight bombardment from high altitude.<sup>7</sup>

These principles were the basis of Air War Plans Division I (AWPD-1), the foundation of the air war plan in World War II. When asked to produce the air war plan, General Arnold, commanding General of the Army Air Forces, "...saw an opportunity for which 'Billy' Mitchell and the believers in his philosophy had been struggling since the conclusion of World War I--the privilege of drafting the specifications around which to create American air power."<sup>8</sup>

As the requirements for defeat of the Axis powers became clearer, AWPD-I strategic objectives were modified by AWPD-42 and the Combined Bomber Offensive (CBO). These plans added German aircraft factories, engine plants, and ball bearing production facilities to AWPD-1 target lists. "But although changes were made as the capabilities changed and new intelligence data was added, the initial plan, AWPD-1 still proved surprisingly stable."<sup>9</sup>

The Air War Planning Department also produced the strategy for the air war against Japan. "The strategy underlying the bombing of Japan proper was similar to that against Germany: to defeat the enemy air force and to so weaken the Japanese capability and will to fight as to cause capitulation or permit occupation against organized resistance; failing this, to make invasion feasible at minimum cost."<sup>10</sup>

### **World War II Results**

Large aircraft losses over Germany challenged strategic bombing principles and drove changes such as night bombardment and fighter aircraft escort of bomber formations. Although



bombing destroyed significant portions of Germany's economic war machine and forced Japan's war industry underground, strategic bombing alone did not defeat the Axis powers. "The fact remained that the Red Army offensive from the east coupled with the British and American ground offensives from the west determined the fate of the Third Reich. Bombing had not exactly realized the promise prophesied by Douhet and Mitchell."<sup>11</sup>

The Army Air Force ended World War II with strategic bombing theory intact. "The strategic bombing survey, commissioned by President Franklin Roosevelt in 1944, concluded that Allied air power had been instrumental in ruining the German war economy and 'in all probability' could have ended the war with Japan by the end of 1945 even if the atomic bombs had not been dropped and no invasion had been contemplated."<sup>12</sup> With evidence such as this, the Army Air Force pursued independence on grounds that air power, strategic bombing, and technology provided the nation a potent alternative to conventional warfare of the past.

### **Independence, Korea, and Vietnam**

The Air Force gained independence in 1947 and communist expansion emerged as the major threat to national security. The new United States Air Force built its forces for the nuclear delivery mission, a mission tailor-made for strategic bombardment theory. "The atomic bomb, its B-29 delivery system, and the independent Air Force came together during a period favorable to the growth of an institution that offered a relatively inexpensive alternative to mass mobilization during a major war...."<sup>13</sup> Our national military strategy was based on the deterrent factor of nuclear weapons and in a period of tight budgets and force drawdowns, the Air Force provided an inexpensive strategic umbrella to deter communist aggression.



However, the Air Force built around Strategic Air Command and nuclear weapons was unprepared for the challenges of the Korean War. "Prevailing doctrine assigned a decisive role to strategic bombing but political limitations on the conduct of the war ruled out a real strategic bombing campaign."<sup>14</sup> The most appropriate targets for a strategic bombing campaign were in China and the USSR, but American political leadership refused to invite further escalation by attacking outside Korean borders. Additionally, the importance of interdiction and close air support to ground force operations and the Air Force's inability to adequately support these missions is evidence that the Air Force was not prepared for the requirements of limited war.<sup>15</sup>

United States Air Force leadership classified Korea as an anomaly and continued to build up a formidable nuclear deterrent capability. "The response to limited conventional war was to seek means of waging limited atomic war which would prevent the United States from being bogged down in a series of inconclusive struggles around the periphery of China."<sup>16</sup> The Air Force provided the nation a strong nuclear deterrent force in the 1950s, but nuclear weapons and conventional capabilities were not designed to combat the covert activities of insurgent forces in the concealed jungles of Vietnam.

President Kennedy placed emphasis on counterinsurgency missions in the armed forces, but as US involvement in Vietnam increased, political and Air Force leadership focused on strategic bombing as a means of shattering North Vietnamese will to continue the war. "Bombing offered an appealing alternative because the US could adjust its intensity. Through judicious selection of targets and the weight of the attacks themselves, the US could turn the pressure up or down and accelerate or slow the intensity."<sup>17</sup>



"The Joint Chiefs of Staff, especially the Air Force, advocated an all-out assault on North Vietnam's military, industrial, economic, and transportation systems--a position to which the Air Force clung for the next eight years."<sup>18</sup> Claims that an intense strategic bombing campaign free of political controls could have won the war cannot be substantiated. North Vietnam's capacity to resupply its forces and continue the war was not destroyed by strategic bombing.

### **A Chain Unbroken**

The theories of Douhet, Mitchell, and ACTS were the genesis of an enduring concept of air power that was institutionalized by the United States Air Force. "The quest for autonomy led to the advocacy of strategic bombardment, which led, in turn, to the deprecation of not only defensive pursuit aircraft but all pursuit aircraft."<sup>19</sup> Indeed, concentration on strategic bombardment had serious repercussions.

Aircraft and tactics were geared toward strategic and tactical delivery of nuclear weapons and could not provide the appropriate support for front-line Army and Marine Corps forces in Korea and Vietnam. These inadequacies resulted in roles and missions disagreements, budget disputes, and general distrust of the other Services' intent. Representative of such disagreements was the "revolt of the admirals" in 1949 after Secretary of Defense Louis Johnson canceled the USS United States "which focused attention on the B-36 and the way the Air Force procured the plane."<sup>20</sup>

Belief in the precepts of strategic bombardment theory created a strategic culture in the United States Air Force. It took an event as devastating as defeat in the Vietnam War to force the Air Force to reevaluate the primacy of strategic bombing. "When doctrine becomes dogma, all kinds of counter-dogma signals can be ignored."<sup>21</sup>



The idea that strategic bombardment can be the decisive factor in war has been replaced by an ardent faith in the strategic capabilities of air power weapons systems. Attitudes generated by this belief have the potential to hinder effective joint force operations. A more thorough incorporation of joint doctrine concepts into air power doctrine will expand parochial perspectives and introduce joint warfare concepts to warfighters before access to professional military education occurs.

### **The Role of Doctrine**

*At the heart of warfare lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is the building material for strategy. It is fundamental to sound judgment.*

**-Gen Curtis E. LeMay, 1968**

### **Joint Doctrine**

*Because we operate and fight jointly, we must all learn and practice joint doctrine, tactics, techniques, and procedures; feed back to the doctrine process the lessons learned in training, exercises, and operations; and ensure Service doctrine and procedures are consistent.*

**-Joint Publication 1**

Doctrine provides military forces a professional knowledge base grounded in experience. It is a belief system to base plans and actions upon. "Military doctrine presents fundamental principles that guide the employment of forces."<sup>22</sup>

Joint Publication 3-0, Doctrine for Joint Operations, "sets forth doctrine to govern the joint activities and performance of the Armed Forces of the United States in joint operations, as well as the doctrinal basis for US military involvement in multinational and interagency operations."<sup>23</sup> Its contents are authoritative and "will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise."<sup>24</sup>

Operations Restore Hope and Desert Storm are indicative of future military operations that will employ joint forces to achieve national objectives. Smaller budgets and shrinking force



structures will require the combined participation of all Services to achieve national objectives. Services will perform certain roles in a JFC's plan, and warfighters must be familiar with joint doctrine to understand their roles in joint force operations.

### **Air Force Doctrine**

*Aerospace doctrine is, simply defined, what we hold true about aerospace power and the best way to do the job in the Air Force.*

**-Air Force Manual 1-1, Volume I**

Air Force Manual (AFM) 1-1, Volume II, Basic Aerospace Doctrine of The United States Air Force, is a compilation of essays that describe air power concepts and their application. It serves as an excellent introduction to air power and as a "guide for the exercise of professional judgment" for those with experience in the employment of air power assets.<sup>25</sup> Air Force doctrine is "an airman's doctrine--written by air power scholars for use by air power practitioners."<sup>26</sup>

In several essays, AFM 1-1 emphasizes the importance of joint operations and describes what air power can contribute to a joint campaign. Strategic attacks, battlefield preparation, and close air support are only a few of the strategic, operational, and tactical missions air power can accomplish in a JFC's concept of operations. But in the process of explaining the uniqueness of air power and its roles and missions, some ideas are expressed that conflict with the team concept of joint operations.

### **Air Power is the Dominant Form of Warfare**

The most disturbing of these ideas is that air power alone has the capability to win a war. Although AFM 1-1 recognizes that "wars are rarely won in a single battle and even more rarely by a single component," it does not completely close the door on this idea.<sup>27</sup>

In an essay entitled "Employing Aerospace Forces: The Operational Art," AFM 1-1 states that "one way a commander can exercise operational art is through a strategic air campaign that



directly attacks an enemy's center of gravity. Providing these centers are accurately identified and can be struck effectively at a tempo that maximizes psychological shock, **the campaign may be decisive through air action alone.**"<sup>28</sup> The second statement contains too many suppositions to be part of formal doctrine, and in a separate essay, the manual acknowledges that history does not support this contention. So why plant the seed in the reader's mind? Because it was an assertion made by early air power theory that was institutionalized by the Air Force. The outstanding success of air power in the Gulf War has, in the opinion of some air power advocates, given new life to this position.

Recent air power advocates support joint warfare and emphasize the significant role of surface forces in contemporary warfare, but they make clear their belief that air power has finally matured and become the dominant form of warfare.<sup>29</sup> In his article entitled "Employing Air Power in the Twenty-first Century," Col John Warden concluded that the world witnessed a new type of warfare in the Gulf War--hyperwar.<sup>30</sup> Hyperwar "...capitalizes on high technology, unprecedented accuracy, operational and strategic surprise through stealth, and the ability to bring all of an enemy's key operational and strategic nodes under near-simultaneous attack."<sup>31</sup> Warden writes that stealth and precision were the keys to air power's success and, in future warfare, commanders will turn to air power first. Col Warden closes his article by writing that "we have moved from the age of the horse and the sail through the age of the battleship and the tank to the age of the airplane."<sup>32</sup>

Colonel Dennis Drew also supports the dominance of air power in future warfare. He views "Desert Storm as a symbol of the maturity of US air power doctrine and of the dominant role that air power has assumed in modern mechanized warfare."<sup>33</sup> Desert Storm's well



orchestrated air campaign resulted in “a thundering aerial onslaught that put enormous pressure on strategic, operational, and tactical targets all at once and continuously, offering the enemy no chance to recoup.”<sup>34</sup> He emphasizes air power as the enabling factor of a three-dimensional campaign that attacks key enemy vulnerabilities. But for this new way of warfare to be accepted, a shift from the traditional view of air power in a supporting role must occur.

Lt Gen Boyd expressed similar ideas on the dominance of air power in an article entitled “Air Power Thinking: Request Unrestricted Climb.” He notes the value of reconnaissance and mobility missions in the low intensity conflict environment and the capability of air power assets to attack strategic, operational, and tactical targets simultaneously. These attributes provide ways “to fight asymmetrically and exert leverage” that make “clear that armies and navies must increasingly appreciate that their capabilities and roles are determined by the existing air power situation.”<sup>35</sup>

While extolling the capabilities of air power, most authors acknowledge the important role of surface forces in future warfare. However, the basic theme of these post-Gulf War articles on air power is clear--air power will dominate warfare in the future national security environment. Is this contention conducive to effective joint force operations? Like strategic bombardment theory, it promotes the belief that air power is the preeminent form of warfare.

### **The Defensive Nature of AFM 1-1**

The writers of Air Force doctrine have the duty to record the unique attributes and distinct capabilities of air power. The 1992 edition of AFM 1-1 accomplished this by blending history and air power concepts into a series of essays useful to airmen of all Services. Essays on aerospace power capabilities, the tenets of aerospace power, and airmindedness, which is an air



power interpretation of the principles of war, are the basis of current air power theory. These essays emphasize the characteristics of air power that distinguish it from other forms of warfare. But in this process, the reader is left with a sense that Air Force doctrine is more concerned with Service preeminence than doctrinal soundness.

AFM 1-1 describes air power capabilities as follows: "Aerospace power's advantages in perspective, speed, range, and maneuverability result in greater mobility and responsiveness than is possible for surface forces. This combination of factors produces the unique flexibility and versatility of aerospace power."<sup>36</sup> These factors enable rapid concentration, provide the ability to attack any type of target, and make air power the most versatile component of military power.<sup>37</sup>

Air Force doctrine conveys the belief that because air power's perspective is broader, it has a greater ability to affect the conduct and outcome of war. "Aerospace power can affect the outcome of surface battles and campaigns before a shot is fired by surface forces."<sup>38</sup> "Aerospace power brings options to strategists that were formerly unavailable, including capabilities to attack targets without first overcoming surface defenses."<sup>39</sup> But underlying these doctrinal statements that champion Air Force capabilities is a problem that has plagued the Air Force for years.<sup>40</sup>

Implicit in these statements is the paranoia that has been part of the Air Force since it became a separate service. It is rooted in the crusade to form the Air Force, defense budget battles, and interservice roles and missions debates. Dr James A. Mowbray, an Air War College faculty member, stated in a recent article on Air Force doctrine that Air Force officers admit that paranoia "...is conveyed from one generation of officers to the next, almost as though it were the sacred legacy of the service."<sup>41</sup> He contends that the Air Force's obsession with survival has been responsible for a less than adequate concentration on air power theory.<sup>42</sup> So while Air



Force doctrine is championing air power capabilities, it is also fulfilling the need to justify and maintain its place in the defense establishment.

The Air Force would perform a great service for joint warfare if it removed statements steeped in paranoia and self defense from its doctrine. "In an increasingly joint world, the Air Force must commit with clarity and without equivocation to what it can do for the theater commander, the ground component commander, and the naval component commander, how effectively it believes it can do those things to which it does commit, and what factors will limit or impair its ability to live up to those commitments."<sup>43</sup>

### **Strategic Culture**

The legacy of strategic bombing theory is alive and well in Air Force doctrine. It is strategic attack, and enemy centers of gravity are its targets. AFM 1-1 states that "strategic attack is probably the most distinctive mission in the Air Force" and "...the strategic mission has shaped the United States Air Force."<sup>44</sup>

AFM 1-1 states that "the term strategic encompasses key enemy targets, whether vital industrial complexes, infrastructure, population centers, or a specific military center of gravity, which if effectively destroyed or damaged, directly affects an enemy's capability or will to resist."<sup>45</sup> These types of targets, indeed the destruction of enemy centers of gravity, are what early air power theorists and World War II planners at ACTS envisioned as the primary air power mission of a separate Air Force. "The capability to put any asset an enemy possesses at extreme risk, at any time, largely fulfills the theory of strategic air power expressed by aviation's pioneers and visionaries."<sup>46</sup>



Few would argue the value of air power's strategic attack capabilities, but can their use alone dominate future warfare to the extent of winning a war before surface force involvement? Even though air power was a decisive factor in World War II and the Gulf War, its perceived potential to win those wars outright will remain a matter of conjecture and it is not possible to conclude that air power alone can win future wars.

Again, Air Force doctrine is clinging to an idea rooted in its past that does not conform to the team concept of joint warfare. In today's warfare, it is the cumulative effects of the assets of a joint force that will win the campaign and not the capabilities of one form of warfare only.

### **Air Force Vision for the Future**

The latest Air Force vision is entitled "Global Engagement: A Vision for the 21st Century Air Force." It is "based on a new understanding of what air and space power mean to the nation--the ability to hit an adversary's strategic centers of gravity directly as well as prevail at the operational and tactical levels of war."<sup>47</sup> The Air Force's preliminary vision document lists Global Attack as one of the Air Force's new core competencies, and the Air Expeditionary Force (AEF) is integral to this concept. The AEF "can be tailored to meet the needs of the Joint Force Commander, both for lethal and non-lethal applications, and can launch and be ready to fight in less than three days."<sup>48</sup> This asset demonstrates Air Force commitment to providing a force capable of meeting the varied requirements of current joint warfare and will be of tremendous value to a JFC.



## CONCLUSION

*If, as I believe, doctrine provides a common foundation for us to use in employing our forces in peace, war, and the numerous gray areas in between, then I would expect for our doctrine to illuminate the judgment of airmen and other military professionals for the joint employment of air forces to accomplish the objectives of the joint force commander--the commander in the field.*

**-Gen Ronald R. Fogleman, Chief of Staff, USAF**

The history of strategic bombardment theory illustrates the danger of institutionalizing a theory of operations. This belief system was partially responsible for a less than adequate state of readiness for the Korean and Vietnam Wars and its tenets sustain the existence of a strategic culture that champions the dominance of air power in future warfare. The Air Force's allegiance to the principles of strategic bombing is responsible in part for "the air power can dominate warfare" position that is evident in recent articles and in current Air Force doctrine.

If recent military operations portend the nature of future US military operations, joint warfare is here to stay. The Air Force should make efforts to ensure that air power doctrine supports the policies and principals of joint warfare. By eliminating comparisons and references to surface forces, air power doctrine will avoid creating an "us against the other Services" mentality in young airmen. This would help decrease paranoia and better prepare airmen for joint duties.

Service doctrine should identify what a Service can provide a JFC to accomplish strategic objectives and remove statements that perpetuate ideas based on singular attributes and outdated concepts. Perhaps the AEF could serve as a doctrinal model for future authors of air power doctrine. These authors should base explanations of the principles of war and the tenets and attributes of air power on their roles in a joint warfare environment. For example, air power's strategic attack capabilities can be extremely valuable to a JFC because they can directly attack



the enemy's center of gravity, not because this form of warfare is superior to surface force capabilities.

Finally, air power alone has never won a war. Even though technology may produce air power weapons with the potential to do so in the future, doctrine should not raise this possibility. It simply does not fit in with the team concept necessary to effectively conduct joint warfare operations in a defense establishment characterized by shrinking budgets and force structures.

These recommendations will result in a more robust, balanced account of air power history and theory. Knowledge of air power employment at the tactical, operational, and strategic level of war will improve, and air power will become a more integrated component of joint force operations.



## NOTES

\* Air power, airpower, and aerospace power are used interchangeably based on Air Force doctrine and recent writing.

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<sup>1</sup> Douhet, Giulio, The Command of the Air. (New York: Coward-McCann, 1942), viii. See editor's introduction.

<sup>2</sup> Ibid., 28.

<sup>3</sup> Mitchell, William, Winged Defense. (New York: G.P. Putnam's Sons, 1925), xv-xvi.

<sup>4</sup> Ibid., 16.

<sup>5</sup> Ibid., 16-17.

<sup>6</sup> MacIsaac, David, "Voices from the Central Blue: The Air Power Theorists," Makers of Modern Strategy from Machiavelli to the Nuclear Age. (Princeton, NJ: Princeton University Press, 1986), 633.

<sup>7</sup> Watts, Barry D., The Foundations of US Air Doctrine. (Maxwell Air Force Base, AL: Air University Press, 1984), 18.

<sup>8</sup> Hansell, Haywood S., The Air Plan that Defeated Hitler. (Atlanta: Higgins-McArthur/Longino & Porter, 1972), 64.

<sup>9</sup> Ibid., 162.

<sup>10</sup> Hansell, Haywood S., Strategic Air War Against Japan. (Washington: Office of Air Force History, 1986), 19.

<sup>11</sup> Tilford, Earl H., Crosswinds. (College Station, TX: Texas A&M University Press, 1993), 7.

<sup>12</sup> Ibid., 8.

<sup>13</sup> Ibid., 8.

<sup>14</sup> MacDonald, Callum A., Korea: The War Before Vietnam. (New York: The Free Press, 1986), 232.

<sup>15</sup> This view is expressed by several authors including MacDonald, Tilford, and Smith whose works are cited in these notes.

<sup>16</sup> Ibid., 248.

<sup>17</sup> Tilford, Earl H., Setup: What the Air Force Did in Vietnam and Why. (Maxwell Air Force Base, AL: Air University Press, 1991), 92.

<sup>18</sup> Ibid., 100.

<sup>19</sup> Smith, Perry M., The Air Force Plans for Peace. (Baltimore, MD: The Johns Hopkins Press, 1970), 34.

<sup>20</sup> Tilford, Earl H., Setup: What the Air Force Did in Vietnam and Why. (Maxwell Air Force Base, AL: Air University Press, 1991), 11-15. Tilford provides an excellent account of this and other disagreements that demonstrate early interservice rivalries.



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- <sup>21</sup> Smith, Perry M., The Air Force Plans for 1970. (Baltimore, MD: The Johns Hopkins Press, 1970), 112.
- <sup>22</sup> The Joint Chiefs of Staff, Joint Publication 1, Joint Warfare of the Armed Forces of the United States. (Washington: US Government Printing Office, 1995), I-3.
- <sup>23</sup> The Joint Chiefs of Staff, Joint Publication 3-0, Doctrine for Joint Operations. (Washington: US Government Printing Office, 1995), i.
- <sup>24</sup> Ibid., i.
- <sup>25</sup> Department of the Air Force, Air Force Manual 1-1 Volume I, Basic Aerospace Doctrine of The United States Air Force. (Washington: US Government Printing Office, 1992), vii.
- <sup>26</sup> Ibid., vii.
- <sup>27</sup> Department of the Air Force, Air Force Manual 1-1 Volume II, Basic Aerospace Doctrine of The United States Air Force. (Washington: US Government Printing Office, 1992), 126.
- <sup>28</sup> Ibid., 129.
- <sup>29</sup> Drew, Dennis M., "Desert Storm as a Symbol," Airpower Journal, Fall 1992.  
Warden, John A., "Employing Air Power in the Twenty-first Century," The Future of Air Power in the Aftermath of the Gulf War, (Maxwell Air Force Base, AL: Air University Press, 1992).  
Boyd, Charles G. and Charles Westenhoff, "Air Power Thinking: Request Unrestricted Climb," Airpower Journal, Fall 1991.
- <sup>30</sup> Warden, John A., "Employing Air Power in the Twenty-first Century," The Future of Air Power in the Aftermath of the Gulf War, (Maxwell Air Force Base, AL: Air University Press, 1992), 81.
- <sup>31</sup> Ibid., 79.
- <sup>32</sup> Ibid., 82.
- <sup>33</sup> Drew, Dennis M., "Desert Storm as a Symbol," Airpower Journal, Fall 1992, 8.
- <sup>34</sup> Ibid., 12.
- <sup>35</sup> Boyd, Charles G. and Charles Westenhoff, "Air Power Thinking: Request Unrestricted Climb," Airpower Journal, Fall 1991, 9.
- <sup>36</sup> Department of the Air Force, AFM 1-1, Vol II, 80-81.
- <sup>37</sup> Ibid., 82-83.
- <sup>38</sup> Ibid., 116.
- <sup>39</sup> Ibid., 211.
- <sup>40</sup> Mowbray, James A., "Air Force Doctrine Problems," Airpower Journal, Winter 1995.
- <sup>41</sup> Ibid., 41, see note 127.



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<sup>42</sup> Ibid., 22.

<sup>43</sup> Ibid., 38.

<sup>44</sup> Department of the Air Force, AFM 1-1, Vol II, 147-148.

<sup>45</sup> Ibid., 152.

<sup>46</sup> Ibid., 152.

<sup>47</sup> Department of the Air Force. "Global Engagement: A Vision for the 21st Century Air Force," 1996, 1.

<sup>48</sup> Ibid., 9.



## BIBLIOGRAPHY

- Barlow, Jason B. Strategic Paralysis. An Airpower Theory for the Present. Maxwell Air Force Base, AL: Air University Press, 1994.
- Berger, Carl, ed. The United States Air Force in Southeast Asia, 1961-1973. Washington: Office of Air Force History, 1984.
- Boyd, Charles G. and Charles Westenhoff. "Air Power Thinking: Request Unrestricted Climb," Airpower Journal. Maxwell Air Force Base, AL: Air University Press, Fall 1991.
- Calvocoressi, Peter and Guy Wint. Total War: The Story of World War II. New York: Pantheon Books, 1972.
- Department of the Air Force. Air Force Manual 1-1, Basic Aerospace Doctrine of The United States Air Force. Washington: US Government Printing Office, 1992.
- \_\_\_\_\_. Air Force Manual 1-2, Basic Aerospace Doctrine of The United States Air Force. Washington: US Government Printing Office, 1992.
- \_\_\_\_\_. Global Engagement: A Vision for the 21st Century Air Force. Washington: Department of the Air Force Internet Access, 1996.
- DeSeverky, Alexander, P. Victory Through Airpower. New York: Simon and Schuster, 1942.
- \_\_\_\_\_. Air Power: Key to Survival. New York: Simon and Schuster, 1950.
- Douhet, Giulio. The Command of the Air. New York: Coward-McCann, 1942.
- Drew, Dennis M. "Desert Storm as a Symbol," Airpower Journal. Maxwell Air Force Base, AL: Air University Press, Fall 1992.
- Fitzsimons, Bernard. US Air Force. New York: Winchmore Publishing Services Limited, 1985.
- Fogleman, Ronald R. "Aerospace Doctrine, More than Just a Theory," Airpower Journal. Maxwell Air Force Base, AL: Air University Press, Summer 1996.
- Frisby, John E. and Grover E. Myers. Strategic Forces in Transition: A Doctrine for Indivisible Aerospace Application. Maxwell Air Force Base, AL: Air University Press, 1985.



Futrell, Robert F. The United States Air Force in Southeast Asia, The Advisory Years to 1965. Washington: Office of Air Force History, 1981.

\_\_\_\_\_. Ideas, Concepts, Doctrine: Basic Thinking in The United States Air Force, 1907-1960. Maxwell Air Force Base, AL: Air University Press, 1971.

\_\_\_\_\_. The United States Air Force in Korea, 1950-1953. Washington: Office of Air Force History, 1983.

Goldberg, Alfred, ed. A History of the United States Air Force. Princeton, NJ: D. Van Nostrand Company, Inc., 1957.

Greer, Thomas H. The Development of Air Doctrine in the Army Air Arm, 1917-1941. Maxwell Air Force Base, AL: USAF Historical Division, Research Studies Institute, Air University, 1955.

Gurney, Gene. Vietnam: The War in the Air. New York: Crown Publishers, Inc., 1985.

Hansell, Haywood S. The Strategic Air War Against Germany and Japan. Washington: Office of Air Force History, 1986.

\_\_\_\_\_. The Air Plan that Defeated Hitler. Atlanta: Higgins-McArthur/Longino & Porter, 1972.

\_\_\_\_\_. Strategic Air War Against Japan. Washington: US Government Printing Office, 1983.

Highham, Robin. Air Power: A Concise History. Manhattan, KS: Sunflower University Press, 1984 and 1988.

Hurley, Alfred F. Billy Mitchell, Crusader for Air Power. Bloomington, IN: Indiana University Press, 1964 and 1975.

The Joint Chiefs of Staff. Joint Publication 3-0, Doctrine for Joint Operations. Washington: US Government Printing Office, 1995.

\_\_\_\_\_. Joint Vision 2010. Washington: US Government Printing Office, 1995.

\_\_\_\_\_. Joint Force Quarterly. Washington: Institute for National Strategic Studies, National Defense University, 1996.

MacDonald, Callum A. Korea: The War Before Vietnam. New York: The Free Press, 1986.



- MacIsaac, David. "Voices from the Central Blue: The Air Power Theorists," Makers of Modern Strategy from Machiavelli to the Nuclear Age. Princeton, NJ: Princeton University Press, 1986.
- Mitchell, William. Winged Defense. New York: G.P. Putnam's Sons, 1925.
- Mowbray, James A. "Air Force Doctrine Problems," Airpower Journal. Maxwell Air Force Base, AL: Air University Press, Winter 1995.
- Mrozek, Donald J. Air Power and the Ground War in Vietnam. Maxwell Air Force Base, AL: Air University Press, 1988.
- Paret, Peter, ed. Makers of Modern Strategy From Machiavelli to the Nuclear Age. Princeton, NJ: Princeton University Press, 1986.
- Smith, Perry M. The Air Force Plans for Peace. Baltimore, MD: The Johns Hopkins Press, 1970.
- Shultz, Richard H. and Robert L. Pfaltzgraff, eds. The Future of Air Power in the Aftermath of the Gulf War. Maxwell Air Force Base, AL: Air University Press, 1992.
- Tilford, Earl H. Setup: What the Air Force Did in Vietnam and Why. Maxwell Air Force Base, AL: Air University Press, 1991.
- \_\_\_\_\_. Crosswinds. College Station, TX: Texas A&M University Press, 1993.
- Warden, John A. The Air Campaign: Planning for Combat. Washington: National Defense University Press, 1988.
- \_\_\_\_\_. "Employing Air Power in the Twenty-first Century," The Future of Air Power in the Aftermath of the Gulf War. Maxwell Air Force Base, AL: Air University Press, 1992.
- Watts, Barry D. The Foundations of US Air Doctrine. Maxwell Air Force Base, AL: Air University Press, 1984.